

North Dakota • English Language Arts

DOCUMENTS REVIEWED¹

North Dakota English Language Arts Content and Achievement Standards: Grades K-12. April 2005.
Accessed from: <http://www.dpi.state.nd.us/standard/content/ELA/ELA.pdf>

Overview

While the organization of the North Dakota ELA standards is fairly clear and straightforward, the expectations themselves are vague, and what limited rigorous content exists is buried deep among distracting and unnecessary standard-specific rubrics.



Clarity and Specificity: 1/3
Content and Rigor: 2/7
Total State Score: 3/10
(Common Core Grade: B+)

General Organization

The K-12 North Dakota ELA standards are organized first into six content standards, which are common across all grade levels and provide “a [very broad] description of what students should know and be able to do within English language arts,” including:

- » Standard 1: Students engage in the research process
- » Standard 2: Students engage in the reading process
- » Standard 3: Students engage in the writing process
- » Standard 4: Students engage in the speaking and listening process
- » Standard 5: Students understand media
- » Standard 6: Students understand and use principles of language

These six standards are divided into topics, then into grade-level “benchmark expectations.”

The state also provides “achievement standards” for each benchmark expectation. These are essentially rubrics describing four levels of proficiency for each benchmark expectation—advanced proficient, proficient, partially proficient, and novice.

Clarity and Specificity

While North Dakota has striven to define grade-specific expectations for ELA, there is little to crow about in this framework.

On the positive side, the standards are presented clearly and in easy-to-read format. Some provide examples and lists to clarify expectations, such as the following third-grade writing and sixth-grade reading standards:

- Organize and develop paragraphs with topic sentences, indentation, punctuation, and capitalization (grade 3)
- Identify literary elements, including plot, setting, characters, conflict, resolution, dialogue, and flashback (grade 6)
- Identify figurative language, including personification, simile, metaphor (grade 6)

The early-reading benchmarks dealing with phonics and phonemic awareness are also reasonably specific, though several need additional detail to further clarify expectations for teachers and students.

Unfortunately, the few adequately detailed benchmark expectations are dwarfed by the sheer number of vaguely worded expectations that leave far too much room for interpretation. Take, for example, the following sixth-grade writing benchmark expectation:

Use strategies to write for different audiences and purposes (grade 6)

By failing to define the audiences or purposes for writing, this standard is essentially meaningless.

In addition, the rigor of benchmark expectations is neither well developed nor aligned from grade to grade. For example, the standards expect students to write persuasive essays in the upper elementary grades, but aren't expected to "identify persuasive texts" until ninth grade. Similarly, the standards ask the students to "use and interpret the meaning of similes, metaphors, alliteration, onomatopoeia, and idioms" at grade 4, but are asked only to identify these elements of figurative language at grade 6.

Finally, the "achievement standards" represent a missed opportunity to clarify expectations. Rather than provide explicit standard- and grade-specific guidance, these rubrics often include generic statements that make empty distinctions between achievement levels. Take, for example, the following achievement standards for the second-grade reading standard "Relate [sic] text-to-self, text-to-text, and text-to-world connections":

Advanced Proficient:	Students make insightful text-to-self, text-to-text, and text-to-world connections.
Proficient:	Students consistently make text-to-self, text-to-text, and text-to-world connections.
Partially Proficient:	Students sometimes make text-to-self, text-to-text, and text-to-world connections.
Novice:	Students rarely make text-to-self, text-to-text, and text-to-world connections.

Such explanations do nothing to clarify what, precisely, students should know and be able to do.

Such critical shortcomings leave North Dakota with a score of one point out of three for Clarity and Specificity. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Strengths

The research standard is perhaps the strongest of the North Dakota content strands, with benchmarks that show a clear progression of skills from grade to grade and clearly require students to learn all the essential elements of the research process.

Standards for English language conventions are reasonably strong, covering nearly all the essential grammar content that students must master to be college- and career-ready. The early-reading standards also demonstrate a clear focus on essential phonics and phonemic awareness skills.

Finally, North Dakota makes some attempts to prioritize essential content across the grades. For example, narrative writing drops out in high school so the focus there is clearly where it should be, on informational and persuasive writing.

Content Weaknesses

Unfortunately, many of the benchmark expectations fail to specify the critical content that students must master to be college- and career-ready.

Vocabulary standards do not address etymology and mention learning Greek and Latin roots only in passing. Connotation and denotation are not explicitly mentioned until ninth grade, and there are *no* vocabulary standards for tenth grade.

The reading standards for middle and high school are often general. In grades 5-8, the state fails to articulate meaningful expectations around the analysis of informational texts, and the high school standards are not sufficiently rigorous. For example, one ninth-grade benchmark requires students to:

Identify the organizational features of fiction, drama, and poetry, i.e., stanza, act, scene, chapter, verse, and article (grade 9)

In high school, students should be doing much more sophisticated literary analysis.

Across all grade levels, the standards also fail even to mention American literature and provide no guidance about the quality or number of texts that students should be reading from grade to grade.

The standards addressing media are muddled, as they define media as any mass media—newspapers, magazines, books—and therefore fail to distinguish multimedia from print as a genre.

Finally, the K-12 standards are riddled with unnecessary, distracting, and unmeasurable benchmarks, such as:

Read to develop life-long reading skills and habits (grade 6)
Use graphic organizers and summarizing to enhance comprehension (grade 6)
Apply universal themes to real-life situations (grade 10)

Such benchmarks add no value, and North Dakota would do well to delete them to leave room for more detailed, content-driven benchmark expectations in every grade.

What's more, the majority of North Dakota's standards document is devoted to the "achievement standards," which, as mentioned above, add little value. For each benchmark expectation, four proficiency descriptors are provided in the achievement standards rubrics, but these proficiency descriptors make meaningless distinctions between levels. Given that such statements make up 80 percent of the text on each page of the standards, their lack of utility and applicability is a serious failing.

Taken together, the combination of vaguely worded standards that leave as much as 65 percent of the essential K-12 ELA content missing and the inclusion of repetitive, vacuous achievement standards that put a disproportionate emphasis on unnecessary (and unhelpful) content earn the state a score of two points out of seven for Content and Rigor. (See *Common Grading Metric*, Appendix A.)

The Bottom Line

With their grade of D, North Dakota's ELA standards are among the worst in the country, while those developed by the Common Core State Standards Initiative earn a solid B-plus. The CCSS ELA standards are significantly superior to what the Peace Garden State has in place today.

¹ North Dakota's academic content standards have not changed since Fordham's last evaluation, the *State of State English Standards 2005*. However, in 2005, we also reviewed supplementary material for North Dakota's benchmark assessments. Moreover, the evaluation criteria that we used to judge the 2010 standards have been substantially revised and improved since 2005. (See Appendix C for a complete explanation of changes in criteria.) Through this new lens, North Dakota's ELA grade changed from a C to a D. The complete 2005 review can be found here: http://www.edexcellence.net/detail/news.cfm?news_id=337&pubsubid=1061#1061.

North Dakota • Mathematics

DOCUMENTS REVIEWED¹

North Dakota Mathematics Content and Achievement Standards: Grades K-12. April 2005.
Accessed from: <http://www.dpi.state.nd.us/standard/content/math/math.pdf>

Overview

North Dakota's standards are well organized and easy to read and understand. Arithmetic is prioritized in the elementary grades and is covered reasonably well. However, the high school material is weaker and much essential content is not covered.



Clarity and Specificity: 2/3
Content and Rigor: 4/7
Total State Score: 6/10
(Common Core Grade: A-)

General Organization

The K-8 standards are organized by five content strands, such as Number and Operations¹ and Geometry. Each strand is further subdivided by topic, and then into grade-level standards. Note that while topics are common across all grade levels, not all topics have standards in every grade.

The high school standards follow the same organizational structure, except that standards are presented by grade band (9-10 and 11-12) rather than for each grade level.

Clarity and Specificity

The standards are well presented and generally easy to read and understand. Many are straightforward and clear:

- Add and subtract simple fractions with like denominators, e.g., $1/4 + 2/4 = 3/4$ (grade 3)
- Order and compare using symbols, i.e., $>$, $<$, $=$, whole numbers (0 to 100,000) and decimals to hundredths (grade 4)
- Identify place value from hundred thousands through the hundredths place (grade 4)
- Explain and demonstrate the relationship between exponential notation and repeated multiplication, e.g., $32 = 3 \times 3$ (grade 5)
- Draw circles using a compass, and identify the components, i.e., radius, chord, diameter, center, and circumference (grade 5)
- Use formulas to determine the circumference and area of circles and the perimeter and area of triangles and parallelograms (grade 6)

However, some standards are too broadly stated to interpret or measure, such as:

- Use patterns to solve problems (grade 3)
- Explain the effects of arithmetic operations on fractions, decimals, and integers (grade 7)
- Develop algebraic expressions, equations, or inequalities involving one or two variables to represent relationships (e.g., given a verbal statement, write an equivalent algebraic expression or equation) found in various contexts (e.g., time and distance problems, mixture problems) (grades 9-10)

It is not clear from these standards what students are expected to know or what kinds of problems they should be able to solve.

In high school, the standards are generally less clear. The organization by strand is confusing, as standards about specific topics, such as quadratics, may be scattered throughout the various strands. Moreover, as illustrated in the above example, standards tend to be very broadly stated and to combine different topics into single standards, such as:

- | Solve linear equations and inequalities, systems of two linear equations or inequalities, and quadratic equations having rational solutions, e.g., factoring, quadratic formula (grades 9-10)
- | Determine and write an equation for a function (i.e., linear, quadratic, polynomial, absolute value, and exponential) that models a mathematical relationship (grades 11-12)

North Dakota's standards are generally clear and easy to understand. However, there are some standards that are not detailed enough to interpret, particularly in the high school material. They “do not quite provide a complete guide to users” (see *Common Grading Metric*, Appendix A) and receive a Clarity and Specificity score of two points out of three.

Content and Rigor

Content Priorities

North Dakota does not provide explicit guidance on the relative importance of the content. However, sound priorities are set implicitly; almost 50 percent of standards in crucial early grades are devoted to the development of arithmetic.

Content Strengths

The standards cover the structure of arithmetic such as commutativity, associativity, and distributivity as well as the inverse nature of addition and subtraction and of multiplication and division. Arithmetic expectations are stated clearly, though, as noted below, they are missing both fluency and standard methods.

Conversion between measurement systems is also covered, as demonstrated below:

- | Given a conversion factor, convert between standard and metric measurements (grades 9-10)

Content Weaknesses

Though recall of number facts is required, instant recall is not. Thus, the standards do not adequately specify that students have automaticity, or quick recall, of basic number facts. These are the basic building blocks for future mathematics; students who are still struggling with basic facts are not prepared to move on to the next level of mathematics.

The development of whole-number arithmetic is straightforward and includes some desirable standards. However, neither fluency nor standard methods and procedures are mentioned, as in:

- | Add and subtract whole numbers between 0 and 10,000 (grade 3)
- | Add and subtract whole numbers between 0 and 100,000 (grade 4)
- | Multiply two- and three-digit numbers by a single-digit number (grade 3)
- | Multiply multi-digit numbers by two-digit numbers (grade 4)
- | Multiply multi-digit numbers by three-digit numbers (grade 5)

These are clear, well-sequenced standards that would be strengthened by specifying fluency and methods. In addition, calculators are introduced in third grade, which may undermine students' mastery of basic arithmetic.

The arithmetic standards continue in this straightforward way. Fraction arithmetic is expected with:

- | Add, subtract, multiply, and divide fractions (grade 6)

However, neither methods nor common denominators are mentioned.

High school geometry is weak. Most of the classical theorems of geometry are not specifically included. Proof is mentioned, but foundations are not covered, and such basic theorems as the Pythagorean Theorem are not proven. Congruence and similarity are covered only by the following vague standard:

- | Determine congruence and similarity among geometric objects (grades 9-10)

The development of quadratic equations is incomplete. There are very few standards specifically about quadratics, which is illustrated by the standard quoted in “Clarity and Specificity” above. It mentions the quadratic formula but is as much about linear equations as about quadratics. Missing content includes completing the square and solving max/min problems.

Other high school weaknesses include coverage of trigonometry and the arithmetic of polynomial and rational functions. Polynomial arithmetic is not mentioned explicitly, though there is:

Perform the operations of addition, subtraction, multiplication, and division on algebraic functions, e.g., given $f(x) = 2x$ and $g(x) = 5x - 7$, find $f(x) + g(x)$ (grades 9-10)

In addition, some STEM-ready content is not covered, including inverse trigonometric functions and polar coordinates.

North Dakota’s standards in K-8 are often strong. Arithmetic is a priority in elementary school and, though it misses some details, it is developed in a straightforward way. The shortcomings in the K-8 standards, coupled with the weak coverage of essential high school content, result in a Content and Rigor score of four points out of seven. (see *Common Grading Metric*, Appendix A.)

The Bottom Line

With their grade of C, North Dakota’s mathematics standards are mediocre, while those developed by the Common Core State Standards Initiative earn an impressive A-minus. The CCSS math standards are significantly superior to what the Peace Garden State has in place today.

¹ Fordham’s 2005 *State of State Math Standards* reviewed the January 2004 draft version of North Dakota’s math standards. For this evaluation in 2010, we reviewed the updated and finalized version (from April 2005). Along with this slight change in material reviewed, the evaluation criteria that we used to judge the 2010 standards have been substantially revised and improved since 2005. (See Appendix C for a complete explanation of changes in criteria.) Even through this new lens, and with this finalized standards document, North Dakota’s math grade remained a C. The complete 2005 review can be found here: http://www.edexcellence.net/detail/news.cfm?news_id=338&pubsubid=1176#1176.